



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 0 867 839 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
19.05.1999 Bulletin 1999/20

(51) Int. Cl.⁶: **G06T 15/10**

(43) Date of publication A2:
30.09.1998 Bulletin 1998/40

(21) Application number: **98105399.4**

(22) Date of filing: **25.03.1998**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**

Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **27.03.1997 US 828787**

(71) Applicant: **RT-Set Ltd.
Herzelia 46100 (IL)**

(72) Inventors:

- **Tzidon, Aviv
Azur (IL)**
- **Tzidon, Dekel
12430 Ramat Hagolan (IL)**
- **Yakir, Ran
45200 Hod Hasharon (IL)**

(74) Representative:

**Modiano, Guido, Dr.-Ing. et al
Modiano, Josif, Pisanty & Staub,
Baaderstrasse 3
80469 München (DE)**

(54) **Method for compositing an image of a real object with a virtual scene**

(57) An improved video polygon method for combining an image of an object with a virtual scene to produce a composite image with respect to a virtual eyepoint. Two ways are provided to retain realism in the composite image. The motion of the real camera that acquires the image is coordinated with the motion of the virtual eyepoint within the virtual scene. For example, to preserve resolution as the virtual eyepoint approaches the transparent polygon on which the image is textured, the real camera is moved closer to the object. To minimize the flat appearance of the textured transparent polygon as the virtual eyepoint moves azimuthally, the transparent polygon is rotated in tandem with the azimuthal motion of the virtual eyepoint. The coordinates of the eyepoint may be provided to the computer using a 6D mouse such as a virtual camera.

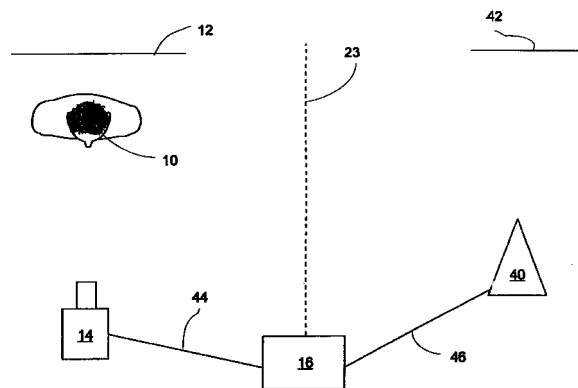


Fig. 2

EP 0 867 839 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 10 5399

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
P, A	EP 0 772 350 A (K.K. PHOTRON TOKYO) 7 May 1997 * page 5, line 36 - page 6, line 52; figure 1 *	1, 14, 16	G06T15/10 H04N5/272
A	GB 2 305 050 A (ORAD HI-TEC SYSTEMS LTD) 26 March 1997 * page 3, line 10 - page 7, line 19; figures 1-4 *	1, 14, 16	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H04N
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 31 March 1999	Examiner Dudley, C
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

EPO FORM 1503 03 82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 98 10 5399

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

31-03-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0772350 A	07-05-1997	CA 2189109 A	01-05-1997
		JP 10042307 A	13-02-1998
GB 2305050 A	26-03-1997	AU 6935396 A	27-03-1997
		BR 9606555 A	15-12-1998
		CN 1196151 A	14-10-1998
		EP 0848886 A	24-06-1998
		WO 9709830 A	13-03-1997
		NO 981010 A	09-03-1998
		PL 325423 A	20-07-1998